

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions, and listing of claims in the application:

LISTING OF CLAIMS:

Claim 1 (Currently amended) A high-efficiency controller of a gas-filled light producing tube, comprising:

a logic integrated circuit controlled and oscillated using ~~by the~~ pulse width modulation, ~~being provided~~ for transforming direct electric ~~currents~~ current supplied from a power source into output signals in a form of ~~outputs of~~ high-frequency sine waves (1.414); and

a power amplifying circuit formed by a pair of transistors respectively coupled to a pair of outputs of the logic integrated circuit to provide a push-pull configuration; and

a transformer electrically connected to ~~an~~ a pair of outputs ~~terminal~~ of the logic integrated circuit controlled and oscillated by the pulse width modulation of the power amplifying circuit for supplying ~~currents of voltages~~ current and voltage as needed by a load.

Claim 2 (Original) The high-efficiency controller of a gas-filled light producing tube as claimed in claim 1, wherein the load is a gas-filled light producing tube.

Claim 3 (Currently amended) ~~The~~ A high-efficiency controller of a gas-filled light producing tube, comprising: as claimed in claim 1, wherein

a logic integrated circuit controlled and oscillated using pulse width modulation for transforming direct electric current supplied from a power source into output signals in a form of outputs of high-frequency sine waves;

a power amplifying circuit coupled to an output of the logic integrated circuit;

a transformer electrically connected to an output of the power amplifying circuit for supplying current and voltage as needed by a load; and,

a subsidiary power circuit is connected to both the logic integrated circuit controlled and oscillated by the pulse width modulation and the transformer for loop-supplying continuously ~~the currents to the power source~~ to the logic integrated circuit.

Claim 4 (Currently amended) The high-efficiency controller of a gas-filled light producing tube as claimed in claim 1, wherein an overload protective circuit is connected to both the logic integrated circuit ~~controlled and oscillated by the~~

~~pulse width modulation~~ and the transformer for ~~making~~ shutting down the logic integrated circuit ~~controlled and oscillated by the pulse width modulation stop working when~~ responsive to an occurrence of an overload happens.

Claim 5 (Currently amended) The high-efficiency controller of a gas-filled light producing tube as claimed in claim 1, wherein an idle disconnection circuit is connected to both the logic integrated circuit ~~controlled and oscillated by the pulse width modulation~~ and the transformer for ~~making~~ shutting down the logic integrated circuit ~~controlled and oscillated by the pulse width modulation stop working in either~~ responsive to an occurrence of** one of a condition of power of the transformer being cut off and a condition of the transformer being in idle motion.

Claim 6 (The high-efficiency controller of a gas-filled light producing tube, comprising: ~~as claimed in claim 1, wherein~~

a logic integrated circuit controlled and oscillated using pulse width modulation for transforming direct electric current supplied from a power source into output signals in a form of outputs of high-frequency sine waves;

a power amplifying circuit coupled to an output of the logic integrated circuit;

a transformer electrically connected to an output of the power
amplifying circuit for supplying current and voltage as needed by a load; and,

a grounding protective circuit ~~is~~ connected to both the logic
integrated circuit ~~controlled and oscillated by the pulse width modulation~~ and the
transformer for ~~make~~ shutting down the logic integrated circuit ~~controlled and
oscillated by the pulse width modulation stop working in either~~ responsive to an
occurrence of one of a grounding condition and contact with a human body's
~~contact~~ body.

Claim 7 (Cancelled).